THE

HORTICULTURAL REGISTER

AND

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ON HORTICULTURAL ARCHITECTURE.

We present to the readers of the Register the first of a series of drawings which have been some time in preparation, destined to extend and cultivate a taste for ornamental habitations, and for rendering such garden spots as may be attached to them embellishments instead of mere receptacles for weeds. Nor need the size of such spots be any impediment, for however small, there is always room for the exercise of taste in laying them out, and when once in order, very little time and attention is required to keep them so, provided such attention is constant. For grounds of large surface containing considerable inequalities, with varieties of wood, water and plain, an extension of the principles laid down will be necessary; but even here the application of a few simple rules of taste may be sufficient to convert them into sources of great enjoyment.

The principal feature of the plan in the drawing is the construction of a green-house in the centre of the cottage, which has only one attic story; the rooms on each side of the entrance may be imagined as being each sixteen feet wide in front and eighteen or twenty deep, with fourteen feet width for the green-house, which would give a front of fortysix feet; behind the drawing-room on the right might be the principal bed-chamber, of sixteen feet square; on the left might be the dining room and a kitchen, with a closet between. This is merely

stated incidentally, as the plan of an area of fifty or one hundred feet square will depend on the taste and pocket of the builder, and the present observations are intended as applicable almost entirely to the garden and conservatory and exterior.

In many houses which are warmed throughout, the entrance is frequently appropriated to plants, and where it is feasible why may not a glass roof be substituted for the shingle or slate, thus affording the necessary vertical light? advance one step farther by giving a glass front and we have a green-house. Those who have had occasion to go during the winter months from their warm parlors some hundred feet in the open air to visit the green-house, and again to return from the warm atmosphere there to the house, can certainly appreciate the advantage of passing at once from one to the other without encountering these sudden changes; while the immediate proximity of their favorite flowers would afford them more frequent opportunity of enjoying them, as well as of partaking this pleasure with their friends.

That such a green-house and the whole house likewise might be warmed by a single fire in the cellar on the hot water system admits not the slightest doubt, the writer having had practical experience on this subject.

The interior arrangement of this small conservatory can be fixed to suit different tastes, but I should prefer any to the usual mode of a straight walk down the centre; for instance, the roof might be additionally supported by three or four slender pillars up which might be trained Lophospermum, Acacia pubescens, Cobea scandens, Eccremocarpus scaber or other beautiful climbing plants, forming festoons of various blossoms under the roof, and if the colors of these are blended with judgment, the effect will be very pleasing; around the base of these pillars should be small stands for three rows in height of pots, to contain early flowers of humble growth, such as Duke Van Thol tulips, the early and very fragrant Iris persica, Oxalis, double Heptica, &c.

Another plan would be to fit up a small stove in the shape of a double hot-bed frame six feet high, six feet wide by eight or ten long, placed in the centre, directly over the boiler in the cellar, the additional heat of which might be conveyed under this frame by simple apertures; the temperature would then be suitable for the succulent tribe, as Cactus, Stapelia, as well as many other tropical plants, particularly bulbs, from which the low degree of warmth proper for

most green-house plants is hardly sufficient to ensure a luxuriant bloom. The flowers of these are much more durable if removed as they are about to expand into the cooler atmosphere of the green-house. I have so decided a partiality for flowers that I say but little on the subject of planting vines in such a house, but those who prefer the rich clusters of grapes to the pendant wreaths or racemes of flowers will find no difficulty in indulging their taste.

Before proceeding to the garden I would make a few remarks on windows, the number of which disfigures many houses, and in truth is perfectly unnecessary.

It has long been known to artists that cross lights or in other words light from all sides of a room completely destroys effect. And a good mechanic will always prefer one direct light on his work to different lights crossing each other. But it was reserved for the scientific men of the present generation to prove by theory what has long been known in practice; it is now clearly understood that two rays of light meeting at varying angles will produce alternately a light and a dark spot, thus accounting for the confusion of light produced by rays crossing each other in various directions. On trial it will be found that one single lofty window, will afford a more pleasant light in a room of the size contemplated in the drawing than two or three on different sides. The piazzas of many houses are formed by a continuation of the roof supported by thick pillars, which give them a heavy appearance; those in the drawing are intended to represent piazzas, with concave roofs formed of painted floor cloth, fastened on slight wooden rafters, cut with the curve desired, then supported by slender pillars connected by wooden arches with open work; such pillars may be quickly encircled by hardy climbing plants, as Boursault rose, Bignonia, Honey-suckle, provided the grass bank around the house be made with a good share of rich compost instead of stone rubbish. Climbing plants, if required to grow well, should have rich earth, as the upper part is always in proportion to the luxuriance of the root.

The cottage is approached by a circular drive; the entrance could not be exhibited in the plan, but it may be judged of from the gate, which should be hung on the other side and is only placed there to make it visible; in front is a grass plot, which should be kept closely mown, and if there is plenty of room one or two ornamental trees may be planted, such as Magnolia, or Liriodendron (tulip tree). The three oval beds may be used for flowers in masses; for instance, that

in the centre for varieties of roses planted at sufficient distance to enable a mixture of the monthly and sanguinea species which have been protected during the winter, thus maintaining a succession; the other compartments, after being decorated by the early Phlox subulata, might be filled with the Scarlet Salvia, or Lobelia splendens, with a narrow border of some blue flowers of low growth, as Campanula speculum (Venus' Looking-glass), or the large blue viola (Heart's-ease), this must however be left to taste. On the right, opposite to the principal chamber window, are three curved beds, each four and a half feet wide, edged with box and divided by narrow walks three or three and half feet in width, for the purpose of permitting examination, intended for choice herbaceous flowers; observing that the tall growing species, as dahlia, lofty delphinium, &c. should be placed in the bed most distant from the house, and those of the lowest growth in front. Here may be a fine collection of Pæonia, Iris, Trigidia, Lychnis fulgens and chalcedonica, Phloxes, particularly the white, Ornothera, Pentstemon, Lilium flavum, Gentians, with many others; it will add much to their charm if the colors are so blended as to harmonize well; for instance, by bringing the blues and yellows or whites and scarlets into immediate contrast, as may be observed in many striped flowers; those who wish to imbibe true principles of taste will achieve more by observing and studying the forms and arrangements of colors presented by nature, than by any artificial rules that can be offered; this department however may safely be entrusted to the superintendence of the ladies, who naturally possess a finer tact in these matters, and to whom it will prove a constant fund of amusement. In the original formation of these beds great attention should be paid not to have the plants too near each other, for then confusion ensues and it is almost impossible to keep them neat, on which much of their effect depends. Besides, in two or three years many species extend themselves so as to overrun the less vigorous plants; room should also be left to intersperse a few pots of Aloysia citriodora, Heliotropium and other inmates of the green-house. The walk at the back of these beds may be five feet wide, bordered on the right by a low thick shrubbery, with a verge ten inches broad, of grass; this would serve as a protection to the flower beds and be a good boundary to the premises.

This walk might be continued in a serpentine direction on to the vegetable garden behind the house (the entrance to which ought to be concealed by leading round a clump of thick shrubbery), first

branching off to the flower garden immediately at the back of the house; which besides roses may be partly devoted to beds of tulips, ranunculus, anemone, &c. These being necessarily taken up in the late summer months may be replaced by autumnal groups of China Aster, Convolvulus major, Marvel of Peru and various other beautiful annuals. Convolvulus major, Ipomea and several others are better grown in pots, as they are then less liable to injury by moving. China Aster, and some others may be removed at any time, even when in flower, if well watered for the first three or four days. Marvel of Peru is perennial if treated like the Dahlia; the great object in the flower garden being to keep up a constant glow of beauty by a continued succession of bloom. Proposing to resume this subject in a future communication, I shall not at present touch on the choice of ornamental shrubs, and also merely hint now that if the spot possess the enviable qualification of a stream or even a pond (from the former the latter could easily be formed), the cultivation of the beautiful aquatic and swamp plants of this and other countries would create very considerable additional interest and beauty. The back door of the green-house should open into this garden; outside of this door, on the left, a stage may be erected, concealing the culinary offices, on which to place the green-house plants during the summer.

The entrance on the left will be observed to lead to the stables, partly concealed by trees and shrubbery; this avenue also leads to the vegetable garden and would be used for carting manure, coals, wood, &c., the windows of the kitchens facing that way. J. E. T.

[To be continued.]

[For the Horticultural Register.]

BEST MODE OF DESTROYING CATERPILLARS.

Mr Fessenden — Is there not some misapprehension in the communication of Mr Ives in the American Gardener's Magazine, relative to the Garden and Orchard Caterpillar? Can he mean by that insect, the scourge of our apple trees, and of our wild cherry trees, for the destruction of which Col. Pickering's judicious instrument was intended? If so, the habits of the insect in Essex and in Norfolk are essentially different. I have been familiar with this insect for forty years, and *never* in a single instance, did I discover its

eggs covered by a *leaf;* with me, it deposits eggs in the autumn, at the extremity of the last year's shoots, surrounding the whole shoot, and protected simply by a varnish. This varnish reflected by the rays of the sun enables you to detect it in winter and spring. It is not a *new* discovery, that the proper time of dislodging them is before they are developed. The suggestion was made twenty years since by John Prince, Esq., and I have been in the constant practice of destroying them before the month of May.

I observe that the Pitmaston *white cluster grape* has risen in England to the rank which it deserves. Mr Andrew Thomson and Loudon having recommended it to the public as among the *first seven* for cultivation in the open air in England. I shall be able this year to prove its value, both for *external* cultivation and for *early* and *late forcing*, and in the interim I shall be able to supply all who may be disposed to try it. JOHN LOWELL.

The Pitmaston White Cluster is a seedling, grown in Yorkshire, hardy, prolific, and producing berries as large as those of the Golden Chasselas. Of its originality there can be no question. Its distinctive characters are as well marked as those which distinguish a melon from a squash.

Remarks by T. G. F.—We are under great obligation to the highly respected author of the above communication, and solicit the continuance of similar favors.

The insect which Mr Ives in the Gardener's Magazine denominates the "Moth of the orchard, or garden caterpillar," and represents as having been found on "trees speckled with occasional dead leaves, adhering to the branches so firmly as to require considerable force to dislodge them," does not exactly coincide with that which is thus described by Dr T. W. HARRIS in *a discourse* delivered before the Mass. Hort. Soc. "The caterpillars of the apple tree, which are hatched from those *curious ring like clusters of eggs surrounding the young twigs*, are, as you well know, furnished with jaws, and devour the leaves of this tree. They have also sixteen legs, and in crawling from leaf to leaf, and branch to branch, spin from their lips a delicate thread, which is a clue to conduct them back to the shelter of their many-coated, silken tents. From the first to the middle of June they descend from the trees, and seclude themselves in various hiding places. Each one then weaves round its body a small silken shroud or cocoon, fills the meshes with a yellowish powder, slips off and

packs in one end of its case its old coat, and appears in a new form, that of a brown chrysalis, or pupa devoid of prominent legs and wings. Sixteen days afterwards the pupa skin is rent, a moth* issues from it, ejects from its mouth a quantity of liquid matter to soften the end of its cocoon, and then forces its way out. In the moth state it is furnished with a very short tongue, and subsists only on the honey and dew of plants."

Not only John Prince, Esq., but many others have urged the expediency of attacking orchard caterpillars in the egg-state. A number of writers for the N. E. Farmer, have, from time to time, advised that mode of effecting their destruction. Among others, "*A Farmer*" says, "Now is the time [August] to destroy caterpillars. The eggs, from which they are produced are now to be found in bunches on the twigs of fruit trees. By taking off these bunches, the vermin are now destroyed in the egg. The color of the bunches is now so much darker than the bark of the twig that they are easily found; it will, by degrees, become lighter, until it will be very nearly the color of the bark. The eggs are laid in July. They remain where laid, unaffected by any change of weather, by frost or heat until spring, when they are hatched by the flowing of the sap, and the vegetative power of the twig. Each bunch of eggs will produce a swarm of caterpillars that will have a nest by themselves. The nest is usually built on the branch that bore the twig on which the eggs were laid.

As caterpillars have no disposition to leave the tree, on which they were hatched, until the time when they leave their nest and separate to come together no more, it is very easy to keep small trees from their nests by destroying the eggs.

I found the first week in July this year, [1831,] that many bunches of eggs were then laid on my peach trees, and small apple trees. I have since taken from those trees more than five times the number of bunches of eggs that I have ever before seen on such trees in one year. If in other places such quantities of eggs are laid as were on my trees, and they be not destroyed before hatching, the caterpillars, next spring, will eat all before them, in spite of all opposition.

Mr Francis Richardson, of Chelmsford, Mass. asserts that " The only effectual way to extirpate caterpillars that I ever found, is to find the eggs, and destroy them, which may be easily done," &c. Thacher's Orchardist likewise observes, " The eggs from which cater-

* Bombyx castrensis. L.

pillars are produced, are attached in clusters to the small twigs by a brownish colored miller in the month of August, and are securely covered with a gummy substance, unsusceptible of injury by the weather during winter," &c. Indeed it has long been known that the easiest and most effectual way of getting rid of caterpillars is to destroy their eggs. This fact, however, though known and practised on by individuals, is not perhaps sufficiently diffused to induce all the benefits which might result from its being more frequently repeated in publications devoted to the interests of cultivators.

It is possible that the caterpillar of Mr Ives is the insect, which Dr Harris has described in the following article.

"The autumnal caterpillar, or, as it is commonly called, *web-worm*, has made its appearance in great numbers. Not only our forest and ornamental trees, but our fruit trees are disfigured with their webs. The eggs are deposited on the extremity of a branch. The young larvæ, when hatched (which happens from the last of June till the middle of August, some broods being early, others late,) *cover the upper surface of the leaf with a web*, beneath which they feed in company, devouring only the upper cuticle and parenchyma of the leaf, leaving the lower cuticle and nervures untouched. As they increase in size, they progressively extend their web downwards, till, eventually, it covers a large portion of the branch,"* &c. Here, it seems the web of the insect covers the upper surface of the leaf instead of the leaf's covering the eggs of the insect. We shall therefore not venture to assert that the web-worm and caterpillar of Mr Ives are identical, but as they both appear to be *weavers* it is not improbable that they are both of the same species.

ON THE COMMON AND BOTANICAL NAMES OF PLANTS AND FLOWERS.

The usual inquiry for the common name of a flower when the botanical name is offered, and the numerous hints given that a pure scientific publication would not meet the demand of the public on subjects in this department of amusing knowledge, seem to render a few explanatory remarks necessary in a periodical of the nature of

* See *New England Farmer*, vol. vii. p. 33, 34.

the Horticultural Register, which aims at and is daily progressing towards an extensive circulation. This demand for the common name of a flower is so natural that a botanist after sharply replying to it, that where a flower is first gathered in uninhabitable forests there could be no common name, intimating by tone his idea of the dulness in the querist, has been known to turn to an entomologist who was exhibiting a new beetle and ask for its popular name.

The origin of this confusion of botanical and common appellations it as ancient as the confusion of tongues at Babel; it is indeed from the endeavor to rectify this consequence of man's ambitious wickedness that all our trouble arises. For the scientific discoverer of a plant, in order to give a name which will be understood by his brother botanists of all nations and languages, conveying to them at the same time some idea of its appearance and properties, compounds one of Greek or Latin, which are more universally understood throughout the world than any other language; should it have been found in extensive uninhabited plains or vast forests, this remains its only name. Even if he find it in a well peopled spot, where its medicinal or other qualities, have acquired for it an appellation from the inhabitants, he would still confer upon it a new title, but would also add to his communication that current in the district where he gathered the specimens. Another very obvious reason exists for this proceeding. The same plants grow wild in different and very distant countries, and also in large districts of the same country; a flower of striking appearance or a plant of wonderful properties would then acquire a distinct name in each language, district, nay, even village, and thus its numerous common titles be sufficient to puzzle the most retentive memory. I may cite as examples the Epigea repens, a beautiful flower which fills the air with its fragance in the month of May; it grows plentifully around Cape Cod and is there called May flower; in Bigelow's Florula Bostoniensis its common name is Ground Laurel, and I have heard a different name from another district. The Mirabilis jalapa, called Marvel of Peru in England, is here called Four o'clock, and the Convolvulus major, Morning Glory. I do not quarrel with these common names, for they are usually well applied and convey to the mind some tangible idea of the flowers; but I wish to shew to the inquirer that the general adoption of them would be impossible, and create considerable confusion, and the system of giving one name to a plant by which it may be known to persons of all nations and languages is preferable,

although it may at first appear more difficult to retain in the memory. And this indeed is only in appearance, for where is the difference in point of mere mechanical difficulty in learning *Epigea repens*, or *May flower* or *ground laurel*, particularly if the plant is once seen creeping on the ground and the idea is attained that *repens* means creeping. There is likewise a great fallacy in the opinion that scientific names are difficult to acquire, and that their number must create confusion in the mind. Present the dictionary of a foreign language to any one with an intimation that he has to learn all the words contained in it, he will start back and deem it impossible; but shew him a chair and tell him it is called in French *une chaise*, a house *une maison*, and so on until he has gradually attained a good knowledge of the language, he will laugh at his former idea of an impossibility. So with botany, if it is attempted to cram a whole dictionary of names and terms into the head at once, the result will be confusion and disappointment; but if like the bee we pass from flower to flower and extract the honey of knowledge, by examination of their habits and structure, the name of each individual will be so closely associated with the plants, that it will readily be suggested to the mind every time it is seen, and by degrees a knowledge of the whole vegetable world may be acquired. Botany is not a science to be learned by intense study in the closet, or by committing to the memory whole pages of terms, but rather by the healthy recreation of cultivating, seeking, handling, examining specimens and by comparing them with descriptions published.

A curious illustration of the subject of this article is offered in a work of three large quarto volumes published last century by Don F. Hernandez, physician and historiographer to Philip II. of Spain. It is a description in Latin of the indigenous plants of New Spain, (South America), then entirely under the Spanish dominion. They are designated only by the common names they bore in the country. Thus in volume 1st, page 237, is a chapter on the Cozticzacatzacuxochitl, or the herbaceous yellow flowering Tzacuaxochitl; same volume, page 245, on the Tequanitzitzicaztli, or the pungent urtica (nettle); volume 3d, page 58, is a chapter on the Pipitzahoacxiuhpatlahoac, and the Hoitzia, a Mexican plant, the flowers of which have been frequently exhibited at the Horticultural Society's rooms from the green-house of Messrs Winship and others, may be there found under the appellation of Hoitzitzilxochitl. These examples will probably be sufficient to satisfy any reasonable person that the

botanical are not *always* more difficult to remember than the common names of plants. It is atmost needless to add that the above work being without plates is more curious than useful. The alteration of long established names has frequently raised the ire not only of beginners in botany but also of those farther advanced in the science, and it must be confessed that attempts of this nature have often been made without sufficient reason; but a few instances will shew that the numerous discoveries and improvements of late years in botanical knowledge have enabled the professors of it to discriminate between plants formerly classed together and to establish such marked differences as to entitle them to distinct names. Where these are well defined and clear, such new names, however vexatious it may seem, should always be adopted. For instance, the Cydonia japonica, when first introduced from China, was supposed to belong to the apple tribe, Pyrus (the apple is Pyrus malus), and was for years called Pyrus japonica, until the plant being old enough to bear fruit, this fruit was found to belong to the quince tribe, (Cydonia,) hence an alteration to Cydonia japonica became proper. A yellow flower, still commonly known here as Corchorus japonicus, was originally brought from China as it grows now, double; being destitute of stamens, pistil or seed vessels, for some time it puzzled the botanists to ascertain the tribe to which it belonged. It was at length thought most to resemble the Corchorus and received that appellation. Some years afterwards however, Mr Barclay of Bury Hill, England, succeeded in importing a plant with single flowers; it was then discovered to be quite different from Corchorus, and was named Kerria by the celebrated botanist Sir James E. Smith, who examined it scientifically; it will probably, however wrongfully, retain its original title Corchorus for some time, as the other flower of the same name has no beauty and is not likely to become much known, although the distinction is quite marked. Numerous other instances might be adduced, but these are sufficient for the purpose.

Having been several times questioned as to what is meant by florists' flowers, I would state that a florist, in its narrow technical meaning, is one who cultivates individual flowers for the purpose of rendering them large and double, as with the dahlia, pink, carnation, &c., or for varying and increasing the splendor of their colors, as with the tulip, auricula, &c. These are hence denominated florists' flowers. This is effected by particular manures or management in various ways, and the success which has attended these efforts is truly surprising and instructive even to those who study scientifically

the laws which govern the functions of vegetable life. In the meantime however, the canons of the floral law of beauty which rule in florists' societies are as different from those which are deemed the criterion of beauty and order by botanists as can well be imagined.

Notwithstanding the foregoing reasoning, however, it must be conceded that the number and novelty of botanic names will to a certain extent inspire a kind of awe in beginners. Those therefore who write popular essays or offer public lectures on subjects of science will always succeed in arresting attention in proportion as they possess the rare but useful talent of temporarily unlearning themselves, (if I may be allowed the expression to designate the ability of dismissing from the mind scientific terms to them as familiar as daylight,) and begin by exhibiting to the reader or audience the earliest tracings of knowledge on their own minds, leading clearly and distinctly through the intermediate shades of their own progress from perfect ignorance to their present attainments. Thus like the rising sun gradually increasing in light until they manifest the meridian splendor of science, instead of flashing before the unaccustomed eye of beginners the glare of high sounding terms, which then only serve to dazzle and confound, or to excite admiration of the brilliancy not solidity of the lecturer or writer's acquirements. J. E. T.

[For the Horticultural Register.]

ON FORCING THE CHERRY.

BY EDWARD SAYERS.

[Concluded from page 100.]

GENERAL OBSERVATIONS AND REMARKS.

In perusing Loudon's Encyclopædia of Gardening, which I have before me, I perceive that the method of forcing the cherry recommended by Abercrombie, Nichol and others, is entirely different in one principle which I have been accustomed to, and found to answer a good purpose, namely, in the temperature of the house when in the process of forcing. From actual experience I cannot agree with the very moderate and even temperature of heat recommended by those authors, as I know not of any fruit that will bear a greater variation of heat than the cherry: nor, on the contrary, that is sooner destroyed in its infant state, by a condensed heated air arising from the heat of flues

or fermentation, either in a high or low degree. The cherry in the act of forcing will endure a variation of heat with *air* from 36° to 75° without injury within the space of five hours, at a time when the sun shines strongly on the house. By observation it will be seen, that the cherry when in flower and fruit in its natural state endures many changes, as its earliness often exposes it to frost, which it endures, and if planted against a south brick-wall, where the sun has great influence, I never perceived any injury received in such location, but always an earlier and better flavored produce than from trees of the same variety in a different situation.

So far as my experience and observation has been, I have never been convinced of any proof of the cherry being lost, in the process of forcing, either by *heat* or *cold.* But by a confined internal *air* or gas not being rectified by the external *air* being admitted into the house.

In order to illustrate this fact it will be proper to give some practical remarks. In the first place, the benefit of night *air*, and the second, in change of heat to correspond with the external air. The indispensable utility of air, and especially night air, was proved by the following accidental fact, at the Royal Gardens, H. C. (Eng.) about the year 1820, by exposing several cherry trees in pots, from the houses which were considered as useless, they having lost the principal part of their blossoms in the process of forcing, while in the act of setting their fruit. The weather at that period being unusually *mild*, the *fruit*, which was in a sickly state, that was left on the tree, *set*, and appeared in a healthy state; in consequence of which, some of the trees thus *cast* were actually taken again into the house and forced to a very good advantage. Hence, it was an evidence of the utility of atmospheric air to the cherry in the process of forcing; but it was also found that too great a depressing of *heat* in sunny weather was not congenial to it, especially, at a time when in blossom or setting the fruit. Therefore, the method was adopted and afterwards followed, of varying the air or heat of the house according to the external air; on fine sunny days the house was allowed to run to 70° or 75° of heat, with plenty of air given, and the fires kept moderately going in order to mollify the harsh external air as it entered the house, and keep a glowing heat by day. When little sun appeared, very moderate fires were kept, and a small portion of air given to keep the temperature down to 45° or 50° to correspond with the external climate. And every caution was taken to vary with, according to the nature of the weather, so as to admit at all times external air.

In dull foggy weather, the syringe was not applied in any state of the process. But the bottom of the house was sprinkled in order to keep a moist fresh internal *air*, as a harsh heat was found to throw the fruit into their infant state immediately.

To the above may be added that the house was always kept clean, and often fumigated with tobacco, to keep down the red-spider, green fly and many insects detrimental to the cherry.

THE CHERRY HOUSE.

The cherry in either of the before mentioned methods, may be forced the first year of planting, although authors do not agree to this principle. Practice has fully convinced me that a crop of cherries may be obtained from well selected trees the first year of planting, without the least detriment to them in any degree whatever.

Management of the House. It would be needless for me to fill your pages, concerning the pruning and training the cherry, which may be done by simply cutting out the water shoots, cross branches and the like, and keeping the trees in a regular healthy manner. The training of the cherry in the hot-house, I cannot recommend in any manner. Previous to the operation of forcing, the trees may be well cleansed by means of soft soap and a spunge, the soft soap being made into a decoction by warm water and applied by the spunge.

The operation of forcing may be begun any time after the last week of January, by first keeping the house moderately close by day, and giving a little fire by night, so that the house is kept barely from freezing. The soil in the house (if the trees are planted in the ground,) will require to be well worked with a fork, and raked neatly, and a quantity of well rotted manure worked into the border every year after the first season of planting. The temperature of the house may be gradually raised from 36° to 40° of a night, fire heat; and from 50° to 60° sun heat, but no higher until the blossom buds begin to break, as the cherry requires to be broke in a strong vigorous state. The syringe will require to be applied every morning, an hour after sunrise (wet foggy days excepted), and evenings after very warm dry days; and the house should be in every way kept clean and wholesome, which should always be a grand object of the forcer; as it will be recollected that the leaves of trees and plants imbibe the surrounding *air* they live in, therefore, the nature of it should be such as to be conductive to health; and perhaps nothing is more injurious to vegetation in a confined state, than vegetable matter undergoing a state of putrefaction.

When the buds begin to expand, air must be addmited at every opportunity of a day, and the sashes may be left at the hot end of the house so as to admit air in the evening, and of mild nights a small portion of air may be left all night; but care must be taken not to leave too much, to chill the house, that the air is brought down to a very low degree, which injures the cherry in this state of growth. In fine sunny days the house may be allowed to run to 65° or 70° of heat with plenty of air, which may be admitted by keeping a gentle internal heat in the flues, by which the external air will be mollified as it enters the house. The house, at night, may be kept as near as possible in this stage to 45° of fire heat.

Treatment of the house in flower. When the trees begin to flower, the syringe is then to be suspended; but, the bottom of the house may be sprinkled with water, and all parts of it refreshed with moisture, to cause a moist internal *air*. External air must be admitted at every favorable opportunity, and as freely as possible be circulated through the house in every part by opening the front sashes and giving air in every department of the house.

A free circulation of air should always be admitted in the cherry house when in flower, in order to set the fruit or stone of the cherry, as it is rarely seen that cherries, peaches or the like are destitute of their stones or seed; although, the cucumber, which is more strictly attended to than any fruit I am acquainted with, by the application of male flower to the female, is often found without a perfect seed, and most generally the finest fruit or pulp are the most destitute of their proper seed; but this cannot be said of the cherry, and hence the utility of setting the fruit is very evident, which is greatly facilitated by the motion of external air. From this the utility of the admission of air is evidently clear.

The temperature of the house at this period, should never be allowed to run above 45° or 50° at the most of *fire* heat in the night. The *sun* heat may be regulated according to the weather, allowing the glass always to rise much higher of fine days with plenty of air.

Setting the Fruit. During the process of setting the fruit, the house will require to be kept very moderate, and as pure an internal air as possible must be continued by admitting it at every opportunity, and night air must be admitted in mild evenings and a small portion at night be left open over the hot end of the house. The trees should be attended to in watering at their roots, which is very essential at this period. When the fruit is beginning to show from the receptacle, the

syringe may again be regularly applied of a morning and fine evening, and fumigation also to keep down the red-spider, green fly and the many insects with which the cherry is liable to be infected. The temperature of the house may be a little raised at this period, but care must be taken that the fire heat of a night does not exceed 50° at any time until the process of stoning is over.

Stoning the Fruit. When the cherry is undergoing the process of stoning, the syringe many then in a measure be suspended, the fruit in this state being partly on a stand, does not require so much moisture applied to it as heretofore. The house at this time will require to be well aired of a day, and a small portion of *air* should be left of a night at every opportunity in mild weather.

Stagnant internal air at this period, if long continued, will eventually destroy the whole crop. The heat should now be kept as regular as possible of a night from 45° to 50° and of a day from 60° to 75°, with plenty of air, varying according to the external temperature as before recommended. When the fruit has perfected its stoning, which may be ascertained by pricking it with a pin, the syringe may then be more generally applied, and the heat gradually raised from 50° to 60° *fire heat*, of a night, and from 60° to 80° of a day, *sun heat* with air ; the pots or plants should be often at this time well watered, which the cherry requires in swelling the fruit when in the process of forcing.

Ripening the Fruit. When the fruit begins to color, the syringe must then be suspended, and the house kept dry ; wet not only spoils the flavor and quality of the cherry, but also disfigures it by cracking the fruit. Every precaution must be taken at this time to give plenty of air by day, to give flavor to the fruit ; and the house may be kept closer of a night to forward the process of ripening.

The plants in pots may be moderately watered in ripening the fruit, but care must be taken that they are not overwatered when nearly ripe, which will spoil their flavor.

After management of the Cherry. When the fruit is all ripened and gathered, the trees may be fully exposed by taking the sashes from the house if the trees are planted in the ground ; if in pots, the pots may be taken out of the house and placed in a northern situation to ripen their wood, previous to their being replanted or again forced in the proper season.

The only variety of cherry that I have seen introduced into the forcing department is the May Duke, therefore, cannot recommend any other either from practice or *observation*.

WALTON HALL.

We believe no apology will be requisite for introducing into the Horticultural Register, the following beautiful account of Walton Hall, England, the seat of Charles Waterton, Esq. whose name will ever live in the breasts of all lovers of natural history, and whose "Wanderings in South America," if not scientific, are highly entertaining, and apparently the effusions of a most benevolent spirit and a heart almost without guile.

It is from the pen of James Stuart Menteath, Esq. of Closeburn Hall, with the exception of the first paragraphs, and has already appeared in a new monthly periodical from London, called the Sportsman, which will not perhaps at first attain much circulation here.

J. E. T.

Walton Park consists of two hundred and sixty acres, surrounded by a wall from nine to ten feet high; there is no public road or footpath through it, and no gun is allowed on any account to be fired in it. The Park abounds with fine timber, and Mr Waterton in laying out some new grounds about twentysix years ago, did everything that love for birds could suggest, to make them come and settle there. This protection to the birds, enables them to perform their daily functions without fear and trembling. In the centre of the Park is a sheet of water twentyfour acres in extent, upon which in winter from two to three thousand wild fowl may sometimes be seen. In the lake is a rock, and on this rock stands Walton Hall, now a modern building, but in times long gone by a place of strength.

"The birds
Securely there they build, and there
Securely hatch their young."

Walton Hall, a place that must like Selborne, be ever dear to the lovers of ornithology, from the many attractive objects it presents in the way of that engaging pursuit, is situated in the parish of Sandal Magna, about four miles from Wakefield, in the county of Yorkshire. This district of country forms part of the great coal formation of Yorkshire. The soil usually overlying the coal stratification is a clay, which being of a stiff tenacious texture, is unfriendly to the better sorts of herbage, unless it be extensively drained and well mixed with calcined limestone, but the clayey soil of the park at Walton,

rests immediately upon a thick stratum of the coal sandstone, which mouldering down, yields it a due proportion of siliceous earth, and makes it an excellent soil for the growth of the richer species of grasses. Trees of nearly all kinds flourish luxuriantly upon it. Among these, especially the Sweet Spanish Chesnut, one of our most valuable trees, and in the present day, far too little encouraged as forest timber, is this year profusely laden with fruit not much inferior to that imported from the South of Europe. The climate is equally favorable with the soil for the growth of the delicate kinds of vegetation — the vine grows on the walls in the open air, and scarcely ever fails to bear each season tolerable grapes; the Sweet-water and the black Hamburg are the only varieties that have been cultivated.

Walton Hall stands upon an Island included in a small lake, well stocked with fish, and has been the residence of the Watertons time out of mind. The present elegant Grecian mansion occupies the site of an ancient castellated house, which encircled by water, and accessible only by a drawbridge, must have been before the use of cannon an impregnable strong hold. During the civil wars of Cromwell and Charles I. this family, staunch adherents to the house of Stuart, defied Old Noll's vengeance, and gallantly kept his forces at bay some time, although the venerable castle was reduced almost to a heap of ruins. All that now remains to tell the tale of its former chivalry, is an ivy clad tower. The tower will be visited with no small interest and curiosity by the ornithologist. The days of rapine and violence have passed away, never we hope to return; this tower, by many ingenious devices and coutrivances, has been made a commodious and undisturbed habitation for many a family of the feathered race. In a snug corner thickly overgrown with ivy, can be seen any day in the year, a pair of common white owls taking their nap; and at night, the ears of the admirers of such music, may enjoy their nocturnal serenades.

> "From yonder ivy mantled tower
> The moping owl does to the moon complain,
> Of such as wandering near her secret bower,
> Molest her ancient solitary reign."

During the breeding season, this industrious couple may be overlooked from the windows of the hall, as they flit to and fro to cater for their young family. Though the owl finds in this tower an unmolested haunt, the pretty starling, the blackbird, the thrush, the wild duck, the wood pigeon, "sweet sequestered bird," and several others,

reposing confidence in the humane owner, which is never abused, resort to this delightful retreat either to enjoy its shelter or rear their young. Leaving the venerable tower and its inhabitants to enjoy that quiet which nothing disturbs, let us enter into the hospitable mansion. Its doors are ever open to the poorest visitor, who craves a view of its rare and curious collection of objects of natural history, and nothing is allowed to be offered to any domestic who attends; in this Mr Waterton sets a noble example to others, who suffer their servants to receive money.

Among the choice rarities of this collection, none are more interesting than the birds.

> "Their plumage, neither dashing shower
> Nor blast that shakes the dripping bower,
> Shall drench again or discompose,
> But screen'd from every storm that blows
> It boasts a splendor ever new,
> Safe with"

the amiable wanderer, who often at the hazard of his life, and suffering dangers by land and water, while exploring the wilds of South America, got them together. The fierce ill looking cayman or crocodile, on whose back Mr Waterton fearlessly mounted, while his men were dragging the monster of the deep from his native element, the snake of gigantic size, which nearly cost the intrepid traveller his life, when he grappled with it, splendidly plumaged birds, and numerous other animals, are seen, preserved in such a manner as to give them the appearance of life, which can be seen in no other museum of natural history.

Among these interesting objects, none arrest the observer more than the "Nondescript" animal, concerning which so much has been affirmed only from conjecture. Under what genus it is to be classed, Mr Waterton best knows; as he has not yet disclosed it. Only one individual has been intrusted with its habits, manners and character.

On leaving the house, its island and its old ivied tower, we next enter the Park. This piece of ground embraces nearly three hundred acres, surrounded by a high wall to keep off poachers and other intruders. As no gun is ever fired within its precincts, that

> "Clamor of rooks, daws and kites
> The explosion of the levell'd tube excites"

is never heard, nor any day suffered to disturb its peace, it may easily be supposed it will be the favorite resort of many birds. Abounding in extensive woods and groves, and an ample space of water, every fowl can suit its own taste for a sheltering place, for a haunt to build its nest and rear its little brood; all those birds which elsewhere suffer from the gamekeeper's ruthless gun and traps, receive protection within the walls of Walton Park. The owl is an especial favorite. Besides our two slumbering friends, whom we left in the old ivied tower in the island, eleven pairs of others occupy holes in trees and other comfortable dormitories, purposely contrived and fitted up for their dwelling places.

The rapacious birds also find a home in Walton Park and a friend in its proprietor. The raven is now and then seen, though but rarely, as the hand of the enemy has fallen heavily upon this noble bird. Great flights of the carrion crow may be seen repairing from all directions to their roosting places in its woods; and magpies in equal numbers taking up in them their sleeping quarters; different varieties of hawks resort for the same purpose, and here their "aeries build."

Some might suppose from the presence of so many birds of prey that no game would be found in the Park; it is quite the reverse. In 1833 a wood-pigeon built in a tree four feet below a magpie, both lived in perfect harmony, hatched their eggs and reared their young. Many similar instances might be adduced. The pheasant, partridge, woodcock in their season, and the hare are very numerous. Were it not for the shelter they meet within the walls of Walton Park, Mr Waterton believes that they would ere this have been rooted out of this district of the country, as some species of birds, such as the larger variety of woodpecker and others have been. The pheasant receives every attention — except for about four months of the year, he can provide himself with food by living upon the beech mast, the sweet chesnut, acorns and other sorts of food. To provide him with winter provision, Mr Waterton plants a quarter of an acre with the thousand headed cabbage which is sown in April and transplanted in June; this the pheasant eats voraciously in winter time. Beans are preferred to any kind of grain as being less pilfered by the smaller birds.

The grasshopper,

> "Saltitans per herbas
> Œstatis est chorista,"

whose sweet summer song was unceasingly heard, is now almost silent; this insect is a dainty repast of the pheasant.

Though the park has not been above two or three years quite inclosed by high walls, its complete privacy and security have attracted a small family of herons to form a colony on some of the aged oaks that overhang the lake; this year there have been four nests, all which have been hatched, and some able-bodied youngsters have been sent out to swell the rising population of heronry. The herons repay their kind landlord's assiduous care of them, by destroying numbers of the water rat that infest all waters and even houses.

Being on the verge of that range of country which the nightingale visits in its annual migration, Walton Park has generally the enjoyment of the mellifluous notes of one or two of these heavenly musicians who each

"In his ev'ning bow'r
Makes woodland echoes ring,
* * * *
And sings the drowsy day to rest."

When the season of the sere and yellow leaf draws on, the migratory birds all knowing the moment when to forsake for a time their loved homes, flock into Walton Park as a place of refuge after their long voyage. Among this assemblage are seen the wood-cock, the field-fare, with its inseparable dear fellow traveller the red start, and several other emigrants from distant lands.

Such are the daily and occasional inhabitants of the woods and groves of Walton Park. Notwithstanding several pairs of wood-pigeons breed in the confines of the estate, when the winter sets in immense numbers flock there to feed on the beech mast. These appear to have come from foreign countries.

If the land birds of all kinds and dispositions receive an invitation, and find a true friend in Mr Waterton, no less so do the water birds, and that most beautiful of all the British birds the king-fisher, which may be considered as the link which unites these two classes together.

The lake abounding in a variety of fish, which we have described as encircling Walton Hall, is the continual and occasional resort of many of our water fowl.

The wild duck, the widgeon, the teal and the coot are seen on its pleasant waters in great numbers. The wild duck is a continual inhabitant of the lake. Several pairs hatch and bring up their young, but during the winter season great flocks of them migrating from the frozen north, as well as of the widgeon and teal pass the inclement season here.

Though the wild ducks are seen on the waters in the day time, at night fall they repair to the sea side, the shores of which are distant nearly a hundred miles, for their supper; and by return of dawn these active travellers, far surpassing in speed of wing the rapidly moving locomotive steam engine, are seen on the bosom of the lake quietly pruning and careening their plumage. The widgeon, feeding like geese on the grasses and aquatic plants, does not go so far for his nightly meal — if, however, he be undisturbed he will feed during the day.

Not unfrequently the wild goose and wild swan take up their abode in severe weather on the lake.

The sea-mew is also not an unfrequent visiter; the abundance of eels and other fish tempt the voracious cormorant to leave the stormy ocean and pass his winter pleasantly at Walton. This bird usually travels with his mate, and it is interesting to observe this loving couple, an example of conjugal affection to human kind, fishing and diving in company. Tired with the sports of the deep, they often rest themselves from their labors on its pretty shores within gunshot of the hall.

An instance of the humane and paternal care and solicitude Mr Waterton evinces for the comfort of the feathered family during winter had nearly escaped me. He encourages the growth of ivy round the stems of his trees, which not only shelters many a poor benumbed bird when the storm rages, but also offers it an agreeable place for its nest in the spring.

From these few and hastily collected observations while visiting Walton Hall, it will appear that Mr Waterton possesses the finest Zoological garden in the kingdom, or perhaps in Europe. Here roaming unconstrained and at free liberty, every bird and animal can be examined in its true character.

In possession of a powerful telescope, which is often used, Mr Waterton watches and examines the habits and movements of his varied feathered population. Almost constantly abroad, nothing escapes him. The perfect seclusion of the Park enables him to experiment harmlessly on his subjects. In the spring of 1833, he made a carrion crow hatch two rook's eggs, a magpie those of a jackdaw, and the daw those of the pie.

In concluding these very imperfect remarks on Walton Hall, I am sure that every one who like myself has shared the hospitality and enjoyment of a visit to this second White of Selborne, will join with me in the words of the Latin poet,

" Hinc tibi copia
Manabit ad plenum benigno
Ruris honorum opulenta cornu."

Here to thee shall plenty flow
And all her riches shew
To raise the honor of the quiet plain.

ON BLANCHING VEGETABLES.

This is a part of the art of gardening which ought to receive much more attention than is usually bestowed upon it in this section of the country, as will be evident from a consideration of the great change, I should rather say amelioration produced by it in vegetables intended to be eaten either crude or after being cooked.

The Lettuce, (Latuca sativa,) in its wild uncultivated state contains a juice whose properties are highly poisonous, and from which a concrete substance like opium has been extracted. The bitter qualities of the endive, although not quite so poisonous, are still very deleterious, and the Celery, (Apium graveolens,) growing in its native wet localities is a most active poison, while the Sea kale, (Crambe maritimæ,) without artificial cultivation is exceedingly nauseous to the taste, and totally uneatable by man or beast; few people would relish the cabbage tribe were it not for the tender delicious blanched heart.

The philosophy of the operation seems to be nearly this; the juice is sucked out of the earth by the roots of a plant, and rises from them through the vessels of the stem into the leaves. In circulating through the leaves a large quantity of its water is evaporated; it is thus highly concentrated, and at the same time acted upon in a way not quite understood, by the air and the light, which action converts it into a juice containing the peculiar properties distinguishing each plant; this returns to the root considerably diminished, after having passed through various secretions by glands, &c., supplying every part with what is necessary for growth, stability, inflorescence, maturity of fruit and seed. What remains is probably useless and is thrown off from the roots by vessels destined for that purpose. Now blanching is depriving the plants entirely of the influence of light and partly of that of air, by covering them up closely in various ways; the consequence is that the juices of the earth rise into the leaves

and there undergo scarcely any conversion either into the natural acrid and poisonous qualities of the plant, or into tough stringy fibre, but it becomes wholesome, tender and refreshing to the palate.

I have given this slight outline of what appears to me the probable proceeding of nature, not only because I entertain a great opinion of gardeners in general as thinking men, to whom it must be agreeable to understand the theory as well as the practice of their operations, so as not to be mere machines, but also because some mistakes are made on this subject which a little reasoning may correct.

Blanching is useful therefore, either to destroy entirely, or considerably to weaken the strong and injurious juices of plants, and to prevent the fibres from attaining that state which renders them strong and stringy; but it never can be desirable where these juices are already delicate in flavor and perfectly innocent in their mature state, or where the vegetable is eaten when just rising from the earth in its youngest and tender state. Thus many take considerable pains to blanch the stems of the pie rhubarb, (Rheum rhaponticum,) and when brought to table, true it is of a fine white color and not stringy, but very insipid, no more to be compared with that grown naturally than a turnip is to a Ribstone pippin. It is a custom in many parts of Germany, and I believe also in Spain, to blanch asparagus, by placing a piece of cane pole or hollow tube over the heads as soon as they can be discovered; they are thus deprived of light and grow very brittle, tender and white. Now the ripened juices of this vegetable are considered rather wholesome than otherwise, and certainly the flavor is seldom overpowering. I have never tasted it blanched, but have dined with gentlemen from Germany who refused to eat it because it was not quite white. The Asclepias syriaca, mentioned as an esculent in the elaborate and valuable communication from the Hon. H. A. S. Dearborn, in the last number of the Horticultural Register, would probably be preferable blanched, as the juice when mature is of a very strong nature. I shall certainly try it if I can procure plants or seeds this spring, although this paper states it is to be eaten in its states of young shoots.

The Cos lettuce, being naturally of an upright growth, is best blanched by tying the leaves together with bass about an inch and a half from the top, and then placing a pot over them; but it is almost impossible to grow this sort well during the summer, as the hot sun forces it into seed before the heart has time to come to

perfection. However, plants brought forward by glass and planted out beginning of May would probably do better. The Imperial and other large round lettuce common here, which grow closer to the ground, whose nature it is to turn their young leaves inwards, or cabbage as it is technically termed, as well as low growing Endives, are considerably improved by covering to exclude the light either with garden pots, the holes of which should be carefully stopped, or with shallow wooden boxes well puttied in the crevices, old fig drums, &c. Endive will do well with a piece of slate or tile laid flat on it; from seven to ten days are sufficient to blanch this tribe of esculents; they should be frequently looked at after five or six days, as the leaves become very delicate and are liable to decay soon after they are in perfection. The afternoon of a dry day should be chosen for first putting on these coverings, which must be pressed a little into the surrounding earth. The drier the plant is throughout the operation the less liable it is to rot. Those who raise lettuce under glass, for early sale, would certainly render them more delicate and beautiful by covering with garden pots five to eight days previous to cutting.

The plant which would probably be most benefitted by blanching is the Dandelion, (Leontodon taraxacum,) for the purpose of using as an early spring salad. A cultivator informed me that he had grown single plants of a size nearly to fill a peck basket. This when blanched is of a beautiful light golden yellow, tender, juicy, with a very slight bitter taste. Much has been written on the beneficial virtues of this vegetable, and sure I am that they have by no means been exaggerated. Now it appears to me that the wholesome bitter of this, mixed with the gentle warmth of the common mustard would make a salad very grateful to the palate, and assist in restoring the healthy tone of the digestive powers, weakened, perhaps, by want of exercise, during a long winter, or by the diminution of those exudations from the skin, so requisite to health. A slight digression may be permitted, on the subject of growing the mustard above mentioned, so as to have it always clean and tender. Make a bed the size you wish, of pretty rich earth; let it be well pulverized on the top, and water it considerably with a fine pierced rose to the watering pot. Then sow the seed rather thick, as lightly and evenly on the surface as possible; water again very gently. Do not strew any earth over the seed, but cover it with a Russia mat, kept from blowing off with stones, or better, by wooden pins, at the corners. If the

weather is warm and favorable, in seven or eight days you will have a fine crop, which may be easily cut without any admixture of earth. This alone is generally considered an extremely wholesome spring salad if not rendered too acid by vinegar. The mustard should never be allowed to come into second leaf before it is gathered, as it then tastes too strong and coarse.

Celery is naturally blanched by the only method of cultivation pursued, that is, earthing up, and therefore requires no remarks at present.

As I have no doubt that the consumption of Sea-kale will considerably increase in this country as it becomes more known, and the palate is more accustomed to it, the remainder of the article will be devoted to this vegetable, although it must be difficult to add much that is new or valuable to any subject which has engaged the able pen of one who so truly combines the theory and practice of horticulture as Hon. John Lowell, of Roxbury. The sea-kale, for several years after its introduction as an esculent, was commonly blanched by being covered with coal ashes sifted fine for that purpose. This caused it to require much cleansing before it could be served at table. At length it was found that a common garden pot inverted over it, would perform the same service without the disagreeable consequence. Finally this method obtained so universally that pots of a large size were manufactured on purpose, with an aperture large enough for the insertion and motion of the arm to cut the crop, and a cover fitting quite close with a flange. This pot when once fixed firmly in the earth does not require moving until all is cut that is desirable, which as the plant throws up heads in succession, like asparagus, is of some consequence. Coverings of this manufacture are, however, more valuable when sea-kale is required to be forced, for then all that is necessary is to heap fresh stable manure over the pot, which being earthen ware, is a good conductor of heat, and permits it rapidly to pass through to the plant; so that if the manure is protected by boards on the north and northeast sides, the kale will soon make its appearance and be ready to gather. If garden pots are used in this process, the holes must be well stopped with corks, otherwise the steam of the manure is apt to get inside, and this will infallibly spoil the vegetable. Where forcing is not intended, but merely blanching required, wooden boxes answer better, for wood being a bad conductor of heat, is also a bad conductor of cold, and therefore affords considerable protection. The only alteration I would venture to

suggest in this system of Mr Lowell, as described in the New England Farmer, is to have the boxes with a double slanting roof, like a dog kennel, the south side lifting up with common leather hinges, so that the heads may be cut without removing the box, and that this lid be fastened down tight with a nut and screw, the edges of contact on the box being covered with list. When grown in long rows to supply markets, instead of separate boxes, boards tongued and grooved, one on another, supported at intervals by stakes, might be placed on each side of the row, and the roof composed of others placed slanting, with lids over each plant. This strikes me as the most economical method of operating on a large scale. Finally, I feel convinced that gardeners who introduce their vegetables to market well blanched will never lack customers, as in addition to the increased beauty of their appearance, no one who has tasted the delicate blanched heart will ever again relish the coarse green leaf. J. E. T.

[For the Horticultural Register.]

ON THE PROPAGATION AND MANAGEMENT OF YOUNG ERICAS.

Messrs Editors — As many ladies and gentlemen in this vicinity are now turning their attention to this beautiful tribe of plants, a few brief remarks on their culture and management may be of service to the admirers of them. There are now a great many beautiful species in this country, which may be procured at prices sufficiently moderate, considering the difficulty and risk of importing them in a living state, and I have no doubt when their elegant forms and colors are more universally known, the increased demand for them will amply repay the exertions and outlay of capital of those who venture them to obtain these ornamental plants for the country.

As few of the Cape Ericas produce seed, they are generally increased by striking from cuttings, and I prefer the beginning or end of July for this operation, to any other month in the year. Let the cuttings be taken off about an inch long, then with a sharp pair of scissors remove the leaves close to the wood half way up. Some propagators pull the leaves off, and if that method be preferred, as it is done much quicker, let the operator be careful and pull them off downwards, for if the wood is not properly ripened the bark will be

taken away with the leaf and the cutting rendered useless. After the leaves have been cut or pulled off, place the cutting on the nail of the thumb and with a sharp knife take off the end close to the joint. Then prepare pots the size of your bell glasses and fill them about half full with small pieces of old broken pots, filling the rest to within half an inch of the top with small sharp sand. If the sand is dry, water it, and smooth the surface quite level, and with a pointed stick plant the cuttings, observing to firm them well, giving a gentle watering to settle the sand about them; press the bell glasses a quarter of an inch into the sand to prevent the admission of air, and place them on a shelf where they will be shaded from the hot sun; examine at least twice a week and keep the sand moist; some sorts will root in three months, others will require six months. As fine surface peat earth with a mixture of white sand cannot be procured in this country, take two or three inches deep of the mould from under old oak trees, add one third of clean white sand and mix them well together. In this I have found the ericas thrive equally as well as when planted in peat earth.

Take small pots usually called pippens, drain them well with old broken bricks or pots, put one of the rooted cuttings in each pot, and fill it with the above soil, firming gently with the fingers.

Cover a piece of ground an inch thick with fine gravel or sifted coal ashes, on which place a glazed frame; set the pots in it, or under hand glasses, observing to set the pots quite level, so that they will hold water; shade with mats in the day time for two or three weeks, removing the covering at night; after this time gradually leave them altogether uncovered, and always watering regularly.

Some sorts put in during July will have struck root in October. These should be potted as before observed, and placed on a shelf in the coldest part of the green-house, as the frost would destroy them if left in the frame, or under hand glasses. As many species grow tall and slender, to prevent this they may be topped after they begin to grow; they will then keep low and bushy.

ROBERT MURRAY,
Gardener to Messrs Winship, Brighton.

SALE OF TREES AND PLANTS ON THE ESTATE OF THE LATE GARDINER GREENE, Esq.

We notice this principally for the purpose of placing on record the dimensions of a magnificent specimen of Salisburia adiantifolia, commonly called the Japan Jingo tree — which the contemplated improvements on this estate will render it necessary to remove.

By comparative admeasurement of its shadow, the height is full forty feet, and the circumference at 3 1-2 feet from the ground is four feet four inches; this plant came originally from China, and is probably the largest of its kind on this continent, and perhaps equal to any in Europe.

It belongs to the coniferous tribe, but has lately been placed with Phyllocladus, in a section constituted for these two only, called Salisburiæ, *(Kunth handbuck der Botanik)* the seeds are eaten when roasted.

The singularity, I may say beauty of its leaves distinguish it from all other trees; they resemble those of that most elegant of the fern tribe, Adiantus, some of which are not uncommon in the woods of New England, whence its name adiantifolia. It is a dioecious plant, and the following notices and answers are from Loudon's Gardener's Magazine for Feb. 1835.

"*Salisburia adiantifolia.*—Has this tree ever flowered in England? [The male has flowered once or twice in the Kew Garden; but, we believe, the female has not.] How is it propagated?"

At the above sale were also many other fine trees and shrubs, among others a Tulip tree, (Liriodendron tulipifera,) about thirty years old, a large and fine Cornus mascula just in bloom. J. E. T.

EXTRACTS FROM FOREIGN PUBLICATIONS.

Celery. — In Paxton's Horticultural Register for March, there is a communication on this subject which deserves attention. The Manchester gigantic celery has long borne away the palm throughout England for its size, weight and quality — roots clean and free from sand and earth, have been exhibited of *eighteen* pounds each! adding it is a humiliating reflection that this was grown by a paper maker and not by a gardener.

There is a new variety of celery called the salmon colored, which surpasses every other kind in size, flavor, crispness and elegance of growth, the seed of which cannot be purchased yet at the seed shops; it has been sold at a higher rate per ounce than pure gold.

The method of cultivation is also quite new — after the trenches are dug they should be lightly filled with a compost of good earth and one third manure, and the celery planted on the top, where they are left to grow their full height without earthing up, at least, only strewing two inches of mould round the roots to cover the fibres when they appear at the surface. Keep the rows free from weeds, and as the plants advance in growth, tie them up slightly with bass at the junction of the leaf and stalk. As they increase, this ligature will have to be removed and a new one put on, taking great care not to destroy their fibres with the hoe while weeding. About three weeks previous to gathering, the earth from the trenches should be piled up gently, nearly covering the plants in order to blanch them.

As to soil, the best celery the author of the communication saw, which weighed sixteen pounds was produced on a sandy soil with a subsoil of open coarse sand.

We shall try the above method of cultivation before we pass a final opinion on its merits, and observe in the mean time that the old process of filling the trenches with earth, certainly checks the growth of celery, although we think the process of blanching must proceed better than by earthing up, after the plant has fully attained its size, and had the influence of the light nothwithstanding the tying up.

To Destroy Insects in Fruit Trees. — Put into a basin a handful of earth, on which pour a small quantity of spirits of turpentine, then add water, stir together till of proper consistence to apply to the trees with a brush. A mixture of earth is necessary, because spirits of turpentine swim on water and will not mix, while if used in too large quantities it is likely to injure the trees.

Loudon's Gardener's Magazine for February, contains extracts from the Magasin D'Horticulture, edited by Dr Courtois.

"In No. viii. there is a memoir on acclimatising plants, in which the principle laid down is, that every exotic tree, in which vegetation is not suspended during winter, is incapable of being acclimatised in countries where the native trees have no sap in the exterior of their trunks (that is, no descending sap) during winter. Deciduous herbaceous plants, from warm countries, may be acclimatised, or rather grown, in cold countries, by covering the ground in which they are

planted, during winter, with such a covering as will exclude frost. Plants with buds on their roots, whether ligneous or herbaceous, from warm countries, may generally be preserved by the same means; and hence the Bouyàrd*ia* triphylla from Mexico, and the Chilean fuchsias, though they die down to the ground every winter, yet the roots being furnished with buds, when they are slightly protected, they never fail to send up shoots the following spring. The pelargonium, on the other hand, having few buds on the roots, and having these and the stems succulent, can seldom be preserved through the winter in the open air. The period at which plants vegetate in their native country, materially influences their susceptibility of acclimatisation. The plants of the south of Chili vegetate in their native country at a time corresponding with our winter; and as they preserve their habit of vegetating at that time here, they never can be perfectly acclimatised unless their period of vegetation could be retarded by giving them a new habit. It is suggested that this might be done by keeping them in the shade, and in a low temperature, until it was desirable that they should vegetate. There are a number of other interesting remarks in this article, chiefly taken from Humboldt."

"After some general remarks on the aspect of England and the neighborhood of London, Dr Courtois notices the different establishments which he visited, commencing with Mr Charlwood's seedshop, in Covent Garden. With the immense botanical collections of seeds from Ameriaca and other parts of the world, which Mr Charlwood imports, Dr Courtois was much gratified; not only with reference to the commercial influence of their dissemination, but to its effects on botanical science. He examined the herbariums at the Linnæan Society and in the British Museum; but, unfortunately, missed those of Mr Lambert, of which the celebrity is quite classical, and which contains amongst other collections the herbariums of Pursh and of Pallas.

"Among the last notices in his tenth number is one of grafting the live points of the shoots of a plant of Bànks*ia* Báxter*i*, which was already dead at the root and up part of the stem, on Banks*ia* grándis, by M. Makoy. In another paper, the cleft-grafting of roses on briar or rose roots is recommended; a practice which, we believe, has been partially adopted by some British nurserymen."

Visit to the principal Vineyards of France and Spain, by James Busby.—"Mr Busby arrived at Cadiz on September 26, 1831, and soon after proceeded to the vineyards of Xeres and its neighborhood. The whole extent of the Xeres vineyards, which produce wine fit for the English market, does not exceed seven thousand acres; and about double that extent will also include the whole of a district which produces an inferior wine, generally sent to England as sherry. 'A great portion of the wines exported to England under the name of sherry, are the growth of Malaga, and are brought round by sea, and transhipped at Cadiz. Most of the sherries sold by retail in England under 40*s*. a dozen are either of this kind, or of the commonest qualities of the district above alluded to in the neigh-

borhood of Xeres, known as the vineyards of San Lucar and Port St Mary."

"Vines, in some places, are trained with single stems to the height of 2 or 3 feet, and then allowed to branch out like gooseberry bushes; they are manured with recent stable dung when it can be got, and the fruit is never found to be injured by it.

"At Malaga Mr Busby arrived on October 21. It is remarkable that the proprietors of vineyards here have found that a dark-colored soil is the best on which to dry their raisin grapes, in the same manner as the inhabitants of the Alps have learned to throw black earth upon snow, to increase the force of the sun's rays in melting it. The muscatel grapes are only grown on a very limited surface, and never farther than two leagues from the coast. 'There are three distinct sorts of raisins; first, the muscatel, which are the finest, and are always packed in boxes of 25 lbs. each, and half and quarter boxes; secondly, sun or bloom raisins, which are prepared like the muscatels, but from a different grape, and are generally packed in boxes, but sometimes in casks; and, thirdly, the lexia raisins, which are packed in casks, or in grass mats called frails. These raisins are of an inferior kind, and require to be dipped into a lexia, or ley, of wood ashes, with a little oil, before drying.' (p. 45.) The grass mats here alluded to are made of the Stipa tenacissima, which also forms the ropes to which the noria baskets are attached; and which, indeed, is applied to a great variety of purposes.

"From Tain, on the Rhone, Mr Busby went to the Hill of Hermitage, of which he gives the following account:—'The Hill of Hermitage is so called from an ancient hermitage, the ruins of which are still in existence near its top. It was inhabited by hermits till within the last 100 years. The hill, though of considerable height, is not of great extent; the whole front which looks to the south may contain three hundred acres; but of this, though the whole is under vines, the lower part is too rich to yield those of the best quality, and a part near the top is too cold to bring its produce to perfect maturity. Even of the middle region, the whole extent does not produce the finest wines. M. Machon, the gentleman whose property we were traversing, pointed out to me the direction in which a belt of calcareous soil crossed the ordinary granitic soil of the mountain; and he said it requires the grapes of these soils to be mixed in order to produce the finest quality of Hermitage. I took home a portion of the soil which he pointed out as calcareous; and the degree of effervescence which took place on my pouring vinegar upon it indicated the presence of a considerable portion of lime. It is probably to this peculiarity that the wine of Hermitage owes its superiority; for, to all appearance, many of the neighboring hills on both sides of the Rhone present situations equally favorable, although the wine produced, even upon the best of them, never rises to above half the value of the former, and, in general, not to the fourth of that value. A good deal may also be attributed to the selection of varieties. The best red wines of Hermitage are made exclusively from one sort of grape, which is named Ciras, properly spelled Scyras, which is

thought to be a corruption of Shiraz, in Persia, whence this grape is said to have been brought originally, by one of the hermits of the mountain. The white wines are made from two varieties, the Roussette and the Marsan. The former yields, by itself, a dry and spirituous wine, which easily affects the head, and the plant produces indifferently; the latter yields a sweeter wine: they are mixed together to produce the best white Hermitage.' (p. 180.) The vines of the Hermitage are strongly manured; and the proprietor said that, without frequent and strong manuring, the vines would scarcely yield anything; adding, that provided only horse or sheep dung were used, there was no danger of giving the wine a bad flavor; which the dung of cows, and especially of pigs, seldom failed to do.

"The sweet *Muscat* and *Old Mountain* wines of Malaga are celebrated all over the world; but though they have the same varieties of vines at Malaga as at Xeres de la Frontera, and pursue a similar practice in making the wine, the best of their dry wines, produced on a soil consisting of decomposed slaty schist, are insipid and flavorless when compared with the Sherries which are produced on the chalky hills of Xeres. The sweet wine of Rivesaltes, the most celebrated in France, is produced on a granitic soil covered with pebbles; and the sweet wines of Cosperon and Collioure, in the same department, are produced on hills of schist, as nearly as possible resembling those of Malaga. But though the dry wines of both these soils are well known, they are not distinguished for their fineness or flavor. Their excellencies are their strength and rich color, which make them valuable for mixing with the weak and light-colored wines of the ordinary growths of Burgundy and Maçon which supply the chief consumption of Paris.

The limited extent of the first-rate vineyards is proverbial, and writers upon the subject have almost universally concluded that it is in vain to attempt accounting for the amazing differences which are frequently observed in the produce of vineyards similar in soil and in every other respect, and separated from each other only by a fence or a footpath. My own observations have led me to believe that there is more of quackery than of truth in this. In all those districts which produce wines of high reputation, some few individuals have seen the advantage of selecting a particular variety of grape, and of managing its culture so as to bring it to the highest state of perfection of which it is capable. The same care has been extended to the making and subsequent management of their wine, by seizing the most favorable moment for the vintage — by the rapidity with which the grapes are gathered and pressed, so that the whole contents of each vat may be exactly in the same state, and a simultaneous and equal fermentation be secured throughout — by exercising equal discrimination and care in the time and manner of drawing off the wine, and in its subsequent treatment in the vats or casks where it is kept — and, lastly, by not selling the wine till it should have acquired all the perfection which it could acquire from age, and by selling, as the produce of their own vineyards, only such vintages as were calculated to acquire or maintain its celebrity. By these means

have the vineyards of a few individuals acquired a reputation which has enabled the proprietors to command almost their own prices for their wines; and it was evidently the interest of such persons that the excellence of their wines should be imputed to a peculiarity in the soil, rather than to a system of management which others might imitate. It is evident, however, that for all this a command of capital is required, which is not often found among proprietors of vineyards; and to this cause, more than to any other, it is undoubtedly to be traced, that a few celebrated properties have acquired, and maintained, almost a monopoly in the production of fine wines."

AN EXCURSION IN SEARCH OF ORCHIDEOUS PLANTS UP THE RIVER MAZZERONI DEMARARA, BY JOHN HENCHMAN.—This is a very entertaining communication, but the cultivation of the orchideous tribe is not sufficiently universal here to give it general interest.

ON SOME INSTRUMENTS FOR TRANSPLANTING LARGE TREES AND THE MANNER OF USING THEM.—These are so simple and so useful, and the object of such importance that we have placed the drawings in the hands of Mr Newell of the Agricultural Warehouse. No doubt he will find it will answer to prepare them for sale.

"Not a single failure has occurred since I have been here, in transplanting numerous plants of the above size, which have been twice removed within eighteen months. I am justified in stating that six or eight plants can be removed by these aids, in the same time as is occupied in removing one or two without them; and many plants, which could not safely be transplanted, for want of means of carrying large unbroken balls, and all the small roots, without bruising or injury, are, by the use of these irons, transplanted with certain success.

"The frequent successful removal of numerous large plants, since I have been here, has often excited the surprise of visiters; and this leads me to hope that this communication will be favorably received, and that it may be deemed worthy of insertion in your valuable Magazine."

MISCELLANEOUS ARTICLES.

COLLECTED BY T. G. F.

A Remedy for Canker and other Wounds in Trees.—The damaged parts of the tree must be cut or pealed off in the spring, and the places rubbed in a fine sunny day with turpentine, which becomes a sort of varnish, so that the wounds will be closed, and the tree will speedily recover. By this simple and cheap remedy many trees have been saved after they had began to shew symptoms of decay.

Remedies against the Cut worm.—This insect is a small ash colored worm, with a stripe almost black, on its back. When fully grown it is about the size of a goose quill, and about an inch and a quarter in length. It *cuts off* (whence its name,) just at, or a little below the surface of the ground, some of our most valuable garden products, viz. cabbages, cauliflowers, beets, &c. It never voluntarily appears above the surface of the ground in the day time, but may be found about an inch below it. In the night it comes abroad, cuts off the stems of the young plants and then buries itself.

The remedies are various. Dr Deane found sea-mud recently taken from the shore, to be effectual. Lime, ashes, sea water, salt and brine have been recommended. In using salt or brine, however, there may be danger of injuring the plants in attempting to destroy the insects. Decoctions of elder, walnut leaves and tobacco, have likewise been supposed to be effectual. Mr Preston, of Stockport, Penn. preserved his cabbage plants by wrapping a hickory leaf round the stem of each. The Hon. Mr Fiske, of Worcester, Mass. in speaking of this insect, says, "To search out the spoiler and kill him, is the very best course; but as his existence is not known except by his ravages, I make a fortress for my plants with paper, winding it conically and firmly above the root, and securing it by a low embankment of earth."

A small quantity of soap suds poured about the roots will answer the double purpose of destroying the worms and manuring the plants. The ravages of the cut worm on Indian corn, which they often destroy, may be prevented by the following prescription: "Put on each hill of corn about half a gill of live ashes, or double that quantity of dead or leached ashes, let it be spread well over the hill so as to surround each stalk of corn. The best method of putting it on is to carry the ashes in a basket, and with a small shovel, which may be made of the thin end of a shingle three or four inches wide, and by putting the shovel in a horizontal position and shaking it, you will spread the ashes over the hill and around the bottom of the stalks. The dew and rain will produce a ley, which will not only destroy or drive away the worms but manure the plants. Great care should be taken, in particular with live ashes, that it does not light on the blades of the stalks; in which case it is almost as destructive as the worms; therefore I have been particular in describing the best method of putting the ashes on."

The author of this recipe says that the above observations are the

results of a successful experiment for several years in fields where the worms were abundant, several rows that were not ashed were almost totally destroyed, but where the ashes were, the corn flourished unmolested, and produced abundantly — the process is not tedious, one hand can easily ash three acres in a day, and do it well.

To preserve Cucumbers and other Vines from Bugs and Flies.— Simply sift soot from the chimney upon them when the dew is on, once in three or four mornings. This remedy has stood the test of experiment for several years in succession.

Mode of preserving Garden Vegetables from Worms.—The beds in which the vegetables are sown or planted should be enclosed by boards, barks or other substances, which worms cannot penetrate or pass over. The enclosed plat should then be well drenched with water, poured from a watering pot, boiling hot, or as near a boiling heat as possible. The seeds may then be planted without any danger of their being injured by worms, as this simple process not only kills every living insect, but destroys the principle of animation of those which are yet in embryo. The gentleman who communicated to us this information, says he has known it put in practice in several instances with complete success.

Weeds in Gravel Walks, and Blight in Fruit. — Fresh oak saw dust, says a London paper, strewed on gravel walks, will prevent the growth of weeds on the same. The dwarf elder, propagated in hot houses, will prevent blight in fruit, grown.

Salt to kill Worms. — It is said that *fine salt*, sown immediately after seeds are put into the ground at the rate of about two bushels to the acre, will destroy grub worms.

Horse Chesnuts. — In Turkey these nuts, the use of which has been neglected in every other country, are ground and mixed with provender for horses, particularly for those that are broken winded, or troubled with coughs. After being boiled a little to take off their bitterness, bruised, and mixed with a small quantity of barley meal or Indian meal, they are good food for poultry.

Another Mode of Preventing the Ravages of Insects. — A Petersburg paper states that the water in which potatoes have been boiled, sprinkled over grain plants, &c., completely destroys all insects in every stage of their existence, from the egg to the fly.

GARDENER'S WORK FOR MAY.

KITCHEN GARDEN. *Cucumbers.* — You may generally plant cucumbers in the open ground for a principal crop, between the fifteenth and twentieth of May, in the Eastern States; about the tenth in the Middle States, and the latter part of April or the beginning of May in the Southern States. Some force cucumbers in hot-beds, but those which are thus produced are less wholesome, as well as less palatable, than such as nature affords in the due course of their proper season. For the principal summer crop, you will dig and smooth the ground as usual. Then line it in squares of six feet. In the centre of each square, dig a hole about twelve inches deep and eighteen inches over, and put into this seven or eight inches of old hot-bed dung, or very rotten manure. Throw thereon about four inches of earth, and mix the dung and earth thoroughly with the spade. Draw the remainder of the earth over the mixture, and form a round hill about a foot broad at top. M. Mahon says, "Some people use hot stable dung, under an idea that its heat would promote the vegetation of the seed; this is a mistaken notion, as in a few hours it loses all it had, for want of a sufficient quantity being together to promote fermentation." When the hills are thus prepared, plant in each five or six cucumber seeds, and cover them with mould about half an inch deep.

Melons. — Those who would raise good melons should be careful to procure good seed, and to plant them remote from inferior sorts, as well as from cucumbers, gourds, pumpkins, and squashes, as they will degenerate in consequence of the mixture. Abercrombie asserts that seed under the age of two years is apt to run too much to vine and show only male flowers. The melon succeeds best in loam, not exhausted by cropping, rich with vegetable manure, with a mixture of sand, but not too light. Other authors assert that a good manure to put under melons is an old compost of good loam, with the dung of neat cattle or swine. The manner of planting may be the same as directed above for cucumbers.

Water Melons. — These require a light, rich, sandy soil. The ground should be prepared, and the planting conducted in every respect as directed for cucumbers, excepting that the hills should be nine or ten feet asunder each way.

Squashes of every kind may be cultivated in the same manner as

cucumbers or melons. But two plants, however, should be left to a hill.

Pumpkins. — These will grow in almost any sort of soil which is proper for hoed crops, provided it is highly manured. It is asserted by some cultivators that pumpkins will grow so much better when planted by themselves than when raised as usual with Indian corn, as to render it expedient always to make them the only crop. When raised alone, they may be from eight to ten feet distant from hill to hill, and two or three plants in each will be sufficient.

Gourds of various sorts are cultivated more for ornament than for use. They may be sown at the same time and cultivated in the same manner as melons, but should be trained to trellises, fences, walls, or to cover arbors. You may plant bush beans and pole beans, for principal crops, at any time during the month, and proceed as directed, page 156. It is recommended to set the poles, and afterwards plant the beans round the poles. Weed and thin advancing crops of radishes. In dry weather water them frequently, which swells the roots and makes them mild and crisp.

Spinage may be sown as a temporary crop between rows of peas, beans, cauliflowers, broccoli, &c. or broadcast by itself, when two ounces will make a bed four feet and a half by thirty feet. Sown in drills, however, it is easier to gather and to keep clear of weeds. The drills may be from nine to twelve inches apart, and the seed sown so that an ounce may sow four feet and a half by thirty. Rake or earth in the seed about an inch deep, after the ground has been thoroughly dug. Carrots, in the Eastern States, may still be sown thin, in drills, from eight to ten inches apart. Weed beets, carrots, parsnips, &c. and thin out the extra plants. Sow peas for succession crops, at least twice this month. If your seed peas are known or suspected to contain insects, scald them a quarter of a minute in boiling water, spread them about, and sow them without delay. In other particulars proceed as directed in our Gardener's Work for April. Sow early sorts of turnips for succession crops. Such sowing is best performed early in the spring, that the roots may acquire a good size before the heat and drought of summer put a stop to their growth. Sow lettuce, peppergrass, and cress, for salad. Ducks, if permitted to run in a garden, will, it is said, destroy slugs, snails, grub worms, caterpillars, and other vermin. They should not, however, be kept in a garden longer than two or three days at a time, lest they become cloyed and indolent. While employed as gardener's assistants they

will need no food, except what they can collect themselves, but should have a tub of water placed for them, if there be no pond or stream to which them can have access. They should not, however, be indulged with the liberties of the garden either in wet weather, or when they can have access to ripe strawberries, gooseberries, &c.

Fruit Garden and Orchard. — Now is, perhaps, the most suitable time in the year for pruning trees. The period immediately before or commensurate with the rising of the sap is to be preferred for this operation. If, however, pruning is commenced when the tree is young, and is properly and seasonably attended to, it will rarely be necessary to take off a large limb, and small limbs, if cut close and smooth may be taken off at any season. The time of the year for grafting as well as for pruning, is when the sap of the stock has begun to move in the spring, and just before the bud has unfolded. For directions see New American Gardener, p. 143. Water newly planted fruit trees, if the weather be at all dry. Give water so copiously as to reach the roots, and sometimes water the tops as well as the roots. To preserve the earth moist about the roots of trees recently planted, it has been recommended to place about them some litter from the stables, or the shives of flax, over which may be placed a little loam, or inverted sods, to keep the shives or litter from being blown away by wind. These will keep the ground moist beneath them, especially if watered now and then. With a syringe or garden engine, sprinkle or shower your fruit trees with soap suds, or a weak alkaline solution, at least once, better twice a week during all the earlier part of the season.

Attack insects by sprinkling over the plants infested by them, by means of a syringe, watering pot, or garden engine, simple water, soap suds, decoctions of tobacco, of elder, &c. &c.

The borders and surface of the ground in general where fruit trees grow should be kept very clear from weeds by the application of a sharp hoe, in a dry day, and as soon as hoed, rake off all the weeds and carry them to the compost bed, or bury them beneath rows of plants, instead of permitting them to dry and waste away in the open air.

Vineyard. — Where suckers from the roots, or shoots from the under part of the stem of grape vines appear, let them be carefully and immediately stripped off. Most of this work, if attended to in due season, may be done by hand, but where that will not answer, you may now use the knife with safety, if vegetation is well advanced,

for although these plants bleed profusely early in the spring, when destitute of leaves, yet when the foliage is fully expanded, the exhalation carries off the fluid or it is expended in the growth of the plant, and it will therefore not escape from a wound made in pruning.

All the shoots which bear fruit, and those which are suitable for next year's bearing, when grown sufficiently long, should be carefully tied up to stakes. It will not at this time be advisable to undertake to hoe or plough the ground between the vines, lest the blossoms or young shoots should be injured. But after the vines have been tied up, towards the end of this, or the beginning of the next month, clear the ground thoroughly of weeds either by the hoe, plough, or cultivator.

Nursery. — Attend to destroying weeds before their seeds are ripened. "Weeds should never be suffered to grow between rows of trees, &c. for these rob them of a great portion of the necessary nourishment; nor should you, for this same reason, plant any kitchen vegetables as is practised by some unskilful and slevenly persons.

"The seed-beds of all young trees and shrubs should now in particular be kept remarkably free from weeds, and this must always be done by a very careful hand weeding." — *M. Mahon.*

Look to your grafted trees. — Loudon says, "In a month after grafting it may be ascertained whether the scion has united with the stock, by observing the progress of its buds; but in general it is not safe to remove the clay for three months or more, till the graft is completely cicatrized." Those which are not well united may have the bandage slackened and fresh clay applied as at first; or the clay or composition may be applied without the bandage in order to preserve the wound from the weather. Seedlings in pots and tubs, of the more delicate plants should now be kept in the shade in the middle of the day, but allowed the morning sun till nine or ten o'clock, and that of the afternoon after four; they must be frequently watered and kept free from weeds.

Flower Garden. — First week. Sow all kinds of annuals, and on fine days give plenty of air to the tender plants, advanced under glass. Towards the middle and latter end of the month, pot off balsams, cypress vine, amaranthus, and other flowers intended for especial cultivation, replacing them under the glass, and shading them the first few days, until the new fibres have taken hold of the earth. Destroy all appearances of weeds in the flower beds.

Camellia Japonica

ra Warratah var: Kurtzii.

Lithog.ª Bevion.